# WASHINGTON STATE BUILDING CODE COUNCIL APPLICATION FOR REVIEW OF A PROPOSED STATEWIDE AMENDMENT TO THE WASHINGTON STATE BUILDING CODE

2012 Code Adoption Cycle

Log#

(office use only)

PLEASE FOLLOW INST	RUCTIONS ON PAGE FIVE
1. State Building Code to be Amended:  [X] International Building Code  [] International Existing Building Code  [] ICC ANSI A117.1 Accessibility Code  [] International Residential Code  [] International Fire Code  [] Uniform Plumbing Code  Section Sections 202 and 504.3	[ ] State Energy Code [ ] International Mechanical Code [ ] International Fuel Gas Code [ ] NFPA 54 National Fuel Gas Code [ ] NFPA 58 Liquefied Petroleum Gas Code
2. Applicant Name (Specific local government, org	
3. Signed:  Proponent  4. Designated Contact Person:	Plan Review Supervisor 1-29-14 Title Date

Office Phone: (425) 452-2732 Cell:(206) 915-5835

E-Mail address: lkranz@bellevuewa.gov

450 110th Ave. NE

Bellevue, WA. 98004

Lee J. Kranz

Name

Address:

Building Code Plan Review Supervisor, City of Bellevue

Title

5. Proposed Code Amendment. Reproduce the section to be amended. Underline all added language, strike through all deleted language. Insert any separate new sections in the appropriate place in the code in order to continue the established numbering system of the code. If more than one section is proposed for amendment or more than one page is needed for reproducing the affected section of the code, additional pages may be attached. (Please indicate number of additional pages below)

Code 2012 IBC

**Sections 202 & 504.3** 

Pages 11 & 96

Amend section to read as follows:

**IBC Chapter 2 Definitions** 

EMERGENCY POWER SYSTEM. (Reference: NEC ARTICLE 700, Section 700.1)

Emergency Power Systems are those systems legally required and classed as emergency by municipal, state, federal, or other codes, or by any governmental agency having jurisdiction. These systems are intended to automatically supply illumination, power, or both, to designated areas and equipment in the event of failure of the normal supply or in the event of accident to elements of a system intended to supply, distribute, and control power and illumination essential for safety to human life.

Applies to the electrical safety of the installation, operation, and maintenance of emergency systems consisting of circuits and equipment intended to supply, distribute, and control electricity for illumination, power, or both, to required facilities when the normal electrical supply or system is interrupted.

LEGALLY REQUIRED STANDBY POWER SYSTEM. (Reference: NEC ARTICLE 701Sections 701.1 & 701.2).

Legally Required Standby Power Systems are those systems required and so classed as legally required standby by municipal, state, federal, or other codes or by any governmental agency having jurisdiction. These systems are intended to automatically supply power to selected loads (other than those classed as emergency systems) in the event of failure of the normal source.

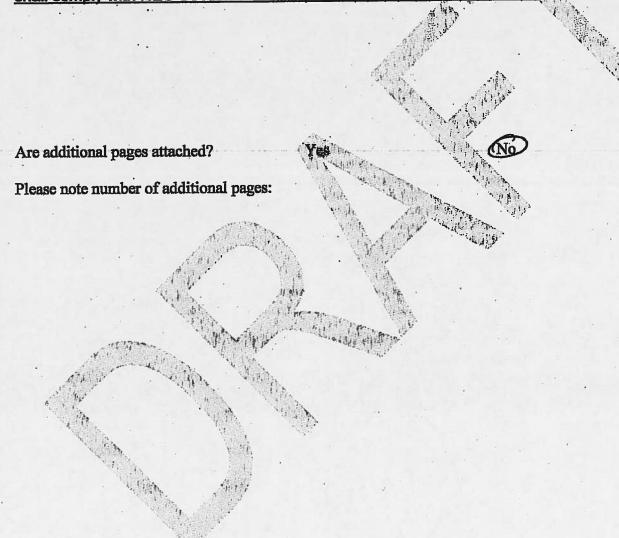
Applies to the electrical safety of the installation, operation, and maintenance of legally required standby systems consisting of circuits and equipment intended to supply, distribute, and control electricity to required facilities for illumination or power, or both, when the normal electrical supply or system is interrupted. The systems covered by this article consist only of those that are permanently installed in their entirety, including the power source.

## WSBC Section 504.3

504.3 Stair enclosure pressurization increase.

For Group R-1 and R-2 occupancies in buildings of Type VA construction equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, the maximum number of stories permitted in Section 504.2 M-may be increased by one provided the interior exit stairways and ramps are pressurized in accordance with Section 909.20 and Section 909.11.

Legally required standby power shall be provided for buildings constructed in compliance with this section and be connected to stainway shaft pressurization equipment, elevators and lifts used for accessible means of egress, electric fire-pumps, hoist way pressurization equipment (if provided) and other equipment as determined by the authority having jurisdiction. Legally required standby power shall comply with NEC Section 701.11, options (A), (B), (C), (D), (F) or (G).



Log#		
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Supporting Data for Statewide Amendment Proposals This information is required for all statewide amendment proposals. Attach supporting documentation, as necessary; incomplete proposals will not be accepted.

The SBCC requires supporting data on any amendment proposal to show:

- a. That it meets basic criteria See Part I to specify how this proposal meets the criteria for code amendment.
- b. The intended effect—See Part II to describe the purpose of the proposed amendment, including the benefits and the problems addressed.
- c. The potential impacts or benefits on business—See Part III/Types of Construction, to explain how methods in construction businesses, industries and services would be affected.
- d. The potential impact on enforcement procedures, See Part III/Types of Services Required, to provide some analysis of the impacts on code enforcement in local jurisdictions.
- e. Economic costs and benefits Use the Table in Part IV of this form to estimate the costs and benefits of the proposal on the construction industry, the user and/or public, the enforcement community, and operation and maintenance.

Keisted codes:	(Does this amendment change	other related codes?)
Proponent:	Phone:	Date:
NOTE: State-wide and emergency please indicate the pertinent rationa (1) The amendment is nee (2) The amendment is nee (3) The amendment is nee	v state-wide amendments to the state building of the proposed amendment by selecting fided to address a critical life/safety need. ded to address a specific state policy or statute ded for consistency with state or federal regulated to address a unique character of the state.	code must be based on one of the following criteria from the list below: e. ations.
Part II • Amendment Benefit:		
PROBLEM(S) ADDRESSED (Des	scribe the intended effect of the proposed code	e amendment):
pressurized stairways or hoist	t ways, emergency egress elevators, ele	framed type V-A buildings that require ectric fire pumps and similar systems other catastrophic event. Definitions for
Legally required standby pov	ver and Emergency power system are o	consistent with the National Electrical
Code and provide clarity for	hese systems.	

This amendment is	needed	to address a specific	state sta	tute and to c	reate coms	rarench Mi	III State 168	guiations.
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YPE OF BENEFITS	PROJEC	TED: More affordabl	e housing	g units will b	e created	and a reaso	onable leve	l of safety
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or the building oc	supanus	will be provided.						
*(4)								
\$							*	
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☐ Residential-Single	JCTION Family	cts or Benefits:  New Construction Residential-Multi Fan affected by amendme	nily 🗆 C	Alteration/Ten commercial	ant Improve □ Industri			
Fire Protection Ind	netru.		7	?es				
Specific Construct Construction Supp	ion Cor	ntractors & Trades:stry:		Electrical, m	echanical	fire protec	tion systen	n designers
Specialty Trades: Types of Buildings	:		Type	V-A wood f	ramed one	-hour rate	đ	
Manufacturers:	4							
Types of Services List any reporting, required by this pr	record	ed: keeping or other requare available from m	airements ultiple so	s. Indicate in	f equipmer	nt, materia	l or service	es
Part IV • Amendme	nt Costs	and Benefits						
20 m		Construction <sup>1</sup>		Enforcem	ent <sup>2</sup>	Operation	s & Mainten	ance <sup>3</sup>
				% impact <sup>4</sup>		Operanon		Benefits <sup>5</sup>

<sup>\$ /</sup> square foot of floor area or other cost. Attach data. Construction costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to theowner/consumer.

<sup>&</sup>lt;sup>2</sup> Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>&</sup>lt;sup>3</sup> Cost/benefits to building owner/tenants over the life of the project.

# Is there an economic impact: xYes No

Explain: The proposal represents a savings of approximately \$106,400 for a 5-story multi-family building, 20,000 sf per floor, for a total of 100,000 sf. The savings are achieved by allowing a second utility service to provide the legally required standby power in lieu of a generator. See attached information.

If there is an economic impact, use the Table below to estimate the costs and savings of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance. If preferred, you may submit an alternate cost benefit analysis.

	Construction <sup>[1]</sup>		Enforcement <sup>[2]</sup>		Operations & Maintenance <sup>[3]</sup>		
Building Type	Costs	Benefits <sup>[4]</sup>	Costs	Benefits <sup>4</sup>	Costs	Benefits <sup>4</sup>	
Residential							
Single family	)t						
Multi-family		\$106,400					
Commercial/Ret							
Industrial							
Institutional	•			8			

The building: 5-story multi-family building, 20,000 sf per floor, for a total of 100,000 sf.

Distance from generator to generator switchboard:

100 ft.

Distance from utility TXF to 'separate service' switchboard: 100 ft.

Generator assumed to be located exterior to building.

Equipment to be connected to the Legally Required Standby System:

Fire pump(s):

qty. 1 at 200 hp

Stair pressurization fans:

gty. 2 at 10 hp each

Elevator hoistway press. fan: qty. 1 at 15 hp

qty. Z at 10 lip each

Elevator equipment:

qty. 1 at 60 hp (There will be >1 elevator in the building, but the LRS

systems needs to carry only one of them at a time.)

Egress lighting:

10 kW

Fire Alarm panels:

1 kW

### **WASHINGTON STATE BUILDING CODE**

<sup>[1] \$ /</sup> square foot of floor area or other cost. Attach data. Construction costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.

<sup>&</sup>lt;sup>[2]</sup> Cost per project plan. Attach data, Enforcement costs include governmental review of plans, field inspection, and other action required for enforcement.

<sup>[3]</sup> Cost to building owner/tenants over the life of the project.

<sup>[4]</sup> Measurable benefit.

# **COST ESTIMATE**

THIS IS A 'DELTA' CALCULATION, BETWEEN THE COST OF A GENERATOR FOR LEGALLY REQUIRED STANDBY POWER VERSUS A SEPARATE ELEC. SERVICE.

CALCULATION WAS BASED ON ONE-LINES 'A' (GENERATOR) AND 'B' (SEPARATE SERVICE), DATED 02/07/14.

ITEM	EST. DELTA
DEDUCT OF GENERATOR AND 4-WIRE FEED, ADD OF 3-WIRE FEED FROM UTILITY TRANSFORMER.	\$99,500
DEDUCT OF BOLLARDS FOR GENERATOR	\$6,000
DEDUCT OF SUPPLEMENTAL LIGHTING AT GENERATOR	\$600
DEDUCT OF 120 VOLT OUTLET AT GENERATOR	\$300
TOTAL DELTA	\$106,400